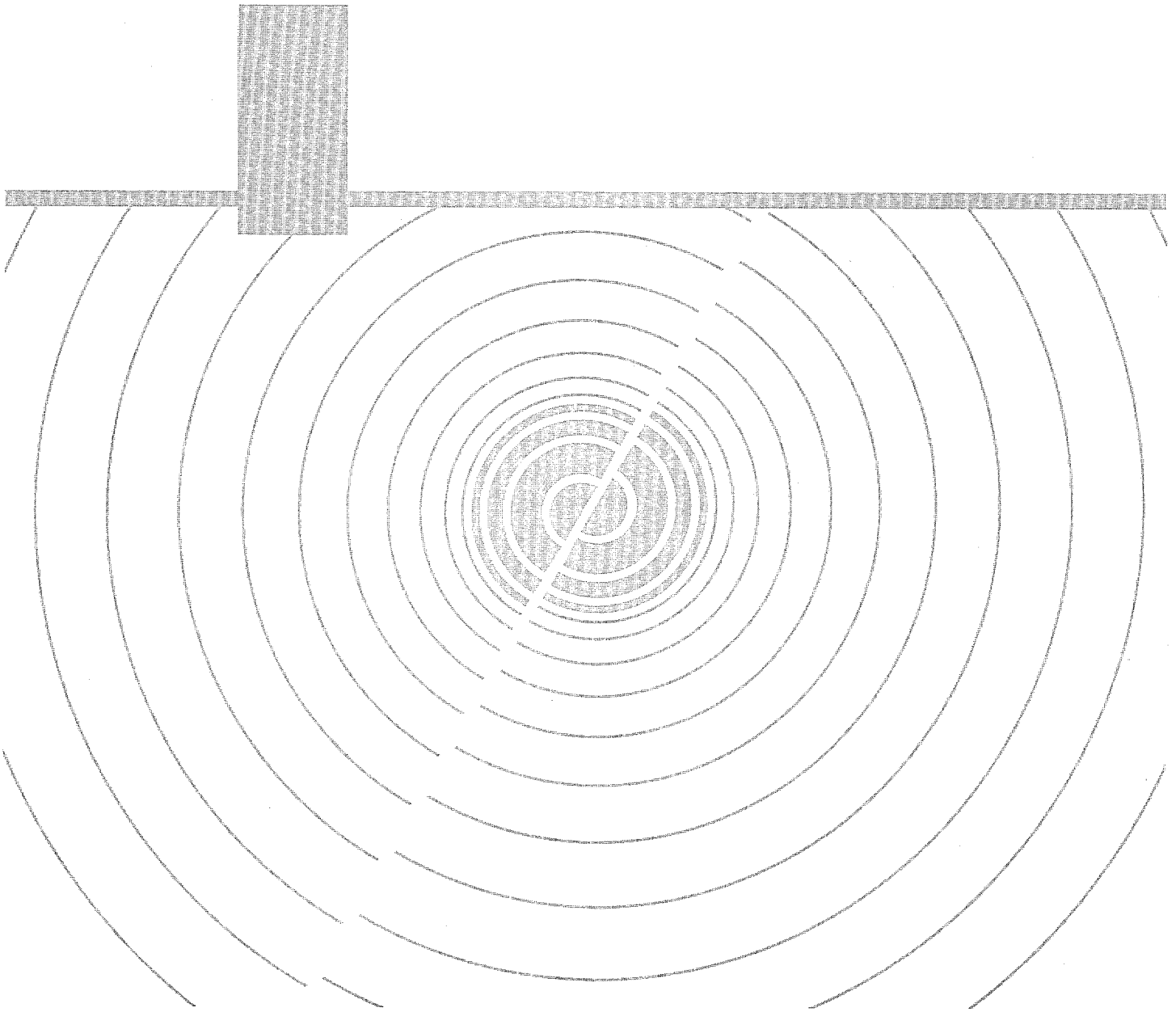
Appendix J: Glossary and Acronyms



Appendix J
Glossary and Acronyms

Glossary of Terms and Definitions Related to Building Codes

Body-wave magnitude
Magnitude of an earthquake as determined from seismic waves that travel through the interior of the Earth.

Brittle failure
Sudden rupture with little warning.

Building code
Officially adopted comprehensive specifications regulating building construction, materials, and performance to protect the public health, safety, and welfare.

Ductile failure
Rupture or collapse preceded by large deformations (bending).

Ductility
Ability of a material to deform without fracturing.

Dynamic structural analysis
Modeling (most often by computer) of the building's behavior during an entire cycle of earthquake forces.

Earthquake zone map
Map that divides the country into zones of relative earthquake hazard and reflects the maximum ground-shaking expected within a specified time period.

Epicenter
Surface projection of the *hypocenter*, the point within the earth where an earthquake originates.

Frame
Support skeleton of the structure that transfers weight to the foundation.

General failure
Total collapse of a structure.

Geophysics
Study of the physics of the Earth, including seismology, geomagnetism, gravity, geodesy, heat flow.

Geotechnical engineering
Civil engineering subdiscipline that applies knowledge of soil and rock mechanics to engineering problems.

Intensity
Measure of ground-shaking based on the degree of damage to man-made structures, changes in the Earth's surface, and felt reports.

Lateral force
Horizontal force generated by an earthquake's side-to-side motion.

Local failure
Partial collapse of a building limited to noncritical sections.

Magnitude
Measure of the physical size of an earthquake.

Model building code
Document published by a private organization containing standardized building requirements available for adoption by political units in the U.S.

Peak ground acceleration
Maximum rate of change in earthquake-generated ground motion at a specified location that produces the maximum force generated by an earthquake.

Peak ground velocity
Maximum speed (distance divided by time) of the earthquake-generated ground motion.

Reinforcement
Steel rods or wire used to strengthen concrete under tension (pulling).

Seismic hazard
Probability that a specified earthquake intensity will occur during a defined period of time.

Seismic hazard map
Map that indicates the likely level of earthquake ground-shaking throughout the country, or local maps that show the relative hazard from earthquakes.

Seismic moment magnitude
Magnitude of an earthquake as determined from the dimensions of the fault, amount of displacement along the fault during the earthquake, and rigidity of rock.

Seismic rehabilitation
Corrections to a building after the initial construction is completed and before damage is caused by an earthquake.

Seismic-resistant design
Building design that evaluates expected horizontal earthquake forces and strengthens the building to withstand these forces.

Seismic retrofit
Repairs to a building damaged by an earthquake.

Seismology
The study of earthquakes.

Structural engineering
Civil engineering subdiscipline responsible for the selection, design calculations, drawing, and specifications of a building frame.

Surface wave magnitude
Magnitude of an earthquake as determined from seismic waves that travel around the surface of the Earth.

Sway
Side-to-side movement of a structure.

Unreinforced masonry construction
Construction using brick, stone, or concrete blocks that are adhered together solely by mortar with no additional reinforcing material.

Significant Acronyms Related to Building Codes

ACI	American Concrete Institute
AASHTO	American Association of State Highway and Transportation Officials
AIA	American Institute of Architects
AISI	American Iron and Steel Institute
ASCE	American Society of Civil Engineers
ATC	Applied Technology Council
BNBC	BOCA National Building Code
BOCA	Building Officials and Code Administrators International, Inc.
BSSC	Building Seismic Safety Council
CABO	Council of American Building Officials
EERI	Earthquake Engineering Research Institute
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
IBHS	Institute for Business and Home Safety (formerly NCPI and IIPLR)
ICBO	International Conference of Building Officials
ICMA	International City/County Management Association
ICSSC	Interagency Committee on Seismic Safety in Construction
IIPLR	Insurance Institute for Property Loss Reduction (formerly NCPI, now IBHS)
ISO/CRS	Insurance Services Office, Commercial Risk Services
NAHB	National Association of Home Builders
NBS	National Bureau of Standards (now NIST)
NCPI	National Committee on Property Insurance (now IBHS)
NCSBCS	National Conference of States on Building Codes and Standards
NEHRP	National Earthquake Hazards Reduction Program
NIBS	National Institute of Building Science
NIST	National Institute of Standards and Technology (formerly NBS)
NSF	National Science Foundation
SBC	Standard Building Code
SBCCI	Southern Building Code Congress International, Inc.
SEAOC	Structural Engineers Association of California
UBC	Uniform Building Code
USGS	United States Geological Survey